=> fil reg

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STRUCTURE FILE UPDATES: 26 AUG 99 HIGHEST RN 235114-88-2 DICTIONARY FILE UPDATES: 26 AUG 99 HIGHEST RN 235114-88-2

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 13, 1999

Please note that search-term pricing does apply when conducting SmartSELECT searches.

=> d stat que 19

L1STR 15 13

NODE ATTRIBUTES:

CHARGE 'IS *+ DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 10

NUMBER OF NODES IS

STEREO ATTRIBUTES: NONE

L2 1384 SEA FILE=REGISTRY SSS FUL L1 L5

0---- C @27 28

VAR G1=18/21/22/AK/27/NO2/X/CY

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY UNS AT 16
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E5 C E1 N AT 16

GRAPH ATTRIBUTES:

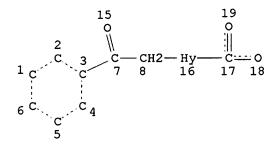
RSPEC 3

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L7 36 SEA FILE=REGISTRY SUB=L2 SSS FUL L5

L8 STR



NODE ATTRIBUTES:
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GGCAT IS MCY UNS AT 16
DEFAULT ECLEVEL IS LIMITED

ECOUNT IS E5 C E1 N AT 16

GRAPH ATTRIBUTES:

RSPEC 3

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L9 14 SEA FILE=REGISTRY SUB=L7 SSS FUL L8

100.0% PROCESSED 36 ITERATIONS 14 ANSWERS

SEARCH TIME: 00.00.01

=> d his 19-

(FILE 'REGISTRY' ENTERED AT 08:23:35 ON 26 AUG 1999)

L9 14 S L8 FUL SUB=L7

SAV L9 GERSTL118B/A

L10 22 S L7 NOT L9

FILE 'HCAOLD' ENTERED AT 08:31:29 ON 26 AUG 1999

L11 0 S L9

FILE 'HCAPLUS' ENTERED AT 08:31:33 ON 26 AUG 1999

L12 7 S. L9

FILE 'USPATFULL' ENTERED AT 08:31:40 ON 26 AUG 1999

L13 1 S L9

FILE 'HCAPLUS, USPATFULL' ENTERED AT 08:31:45 ON 26 AUG 1999 L14 8 DUP REM L12 L13 (0 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 08:31:50 ON 26 AUG 1999

=> d 19 ide can tot

L9 ANSWER 1 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 194474-34-5 REGISTRY

CN Pyridinium, 3,5-bis(ethoxycarbonyl)-2,6-dimethyl-1-(2-oxo-2-phenylethyl)-, tetrakis(pentafluorophenyl)borate(1-) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Borate(1-), tetrakis(pentafluorophenyl)-, 3,5-bis(ethoxycarbonyl)-2,6-dimethyl-1-(2-oxo-2-phenylethyl)pyridinium (9CI)

MF C24 B F20 . C21 H24 N O5

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 194474-33-4 CMF C21 H24 N O5

CM 2

CRN 47855-94-7 CMF C24 B F20 CCI CCS

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 127:206408

L9 ANSWER 2 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN

194474-33-4 REGISTRY
Pyridinium, 3,5-bis(ethoxycarbonyl)-2,6-dimethyl-1-(2-oxo-2-phenylethyl)-CN (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C21 H24 N O5

CI COM

SR CA

L9 ANSWER 3 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 67557-45-3 REGISTRY

CN Pyridinium, 3-(ethoxycarbonyl)-2-methyl-1-[2-(4-nitrophenyl)-2-oxoethyl]-, bromide (9CI) (CA INDEX NAME)

MF C17 H17 N2 O5 . Br

• Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 89:108995

L9 ANSWER 4 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 67557-44-2 REGISTRY

CN Pyridinium, 3-(ethoxycarbonyl)-2-methyl-1-(2-oxo-2-phenylethyl)-, bromide

(9CI) (CA INDEX NAME)

MF C17 H18 N O3 . Br

LC STN Files: CA, CAPLUS

• Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 89:108995

L9 ANSWER 5 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59603-51-9 REGISTRY

 ${\tt CN Pyridinium, 1-[2-(4-chlorophenyl)-2-oxoethyl]-5-(ethoxycarbonyl)-2-methyl-2-oxo$

, bromide (9CI) (CA INDEX NAME)
MF C17 H17 C1 N O3 . Br

● Br-

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 85:21063

L9 ANSWER 6 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59603-50-8 REGISTRY

CN Pyridinium, 5-(ethoxycarbonyl)-2-methyl-1-[2-(4-nitrophenyl)-2-oxoethyl]-, bromide (9CI) (CA INDEX NAME)

MF C17 H17 N2 O5 . Br

LC STN Files: CA, CAPLUS

• Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 85:21063

L9 ANSWER 7 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59603-49-5 REGISTRY

CN Pyridinium, 5-(ethoxycarbonyl)-1-[2-(4-methoxyphenyl)-2-oxoethyl]-2-methyl-, bromide (9CI) (CA INDEX NAME)

MF C18 H20 N O4 . Br

● Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 85:21063

L9 ANSWER 8 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59603-48-4 REGISTRY

CN Pyridinium, 5-(ethoxycarbonyl)-2-methyl-1-(2-oxo-2-phenylethyl)-, bromide (9CI) (CA INDEX NAME)

MF C17 H18 N O3 . Br

LC STN Files: CA, CAPLUS

• Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 85:21063

L9 ANSWER 9 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59195-37-8 REGISTRY

CN Pyridinium, 1-[2-(4-bromophenyl)-2-oxoethyl]-4-(ethoxycarbonyl)-2-methyl-, bromide (9CI) (CA INDEX NAME)

MF C17 H17 Br N O3 . Br

$$\begin{array}{c|c}
0 \\
C - OEt
\end{array}$$
Br
$$\begin{array}{c|c}
Me
\end{array}$$

● Br

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 84:179988

L9 ANSWER 10 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59195-36-7 REGISTRY

CN Pyridinium, 4-(ethoxycarbonyl)-2-methyl-1-[2-(4-nitrophenyl)-2-oxoethyl]-,

bromide (9CI) (CA INDEX NAME)

MF C17 H17 N2 O5 . Br

LC STN Files: CA, CAPLUS

• Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 84:179988

L9 ANSWER 11 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 59195-35-6 REGISTRY

CN Pyridinium, 4-(ethoxycarbonyl)-1-[2-(4-methoxyphenyl)-2-oxoethyl]-2-methyl-

, bromide (9CI) (CA INDEX NAME)

MF C18 H20 N O4 . Br

● Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 84:179988

L9 ANSWER 12 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 54342-81-3 REGISTRY

CN Pyridinium, 4-(ethoxycarbonyl>-2-methyl-1-(2-oxo-2-phenylethyl)-, bromide (9CI) (CA INDEX NAME)

MF C17 H18 N O3 . Br

LC STN Files: CA, CAPLUS, USPATFULL

$$\begin{array}{c} \text{CH}_2\text{-}\text{C-Ph} \\ \text{Me} \\ \text{N}^+ \\ \text{C-OEt} \\ \text{O} \end{array}$$

• Br-

3 REFERENCES IN FILE CA (1967 TO DATE)

3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 117:26336

REFERENCE 2: 84:179988

REFERENCE 3: 82:16671

L9 ANSWER 13 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 24620-81-3 REGISTRY

CN Pyridinium, 1,1'-[[1,1'-biphenyl]-4,4'-diylbis(2-oxo-2,1-ethanediyl)]bis[3-

carboxy-, dibromide (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Pyridinium, 1,1'-[4,4'-biphenylylenebis(carbonylmethylene)]bis[3-carboxy-, dibromide (8CI)

MF C28 H22 N2 O6 . 2 Br

LC STN Files: CA, CAPLUS, RTECS*, TOXLIT

(*File contains numerically searchable property data)

CRN (24570-37-4)

●2 Br-

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 72:77111

L9 ANSWER 14 OF 14 REGISTRY COPYRIGHT 1999 ACS

RN 24570-37-4 REGISTRY

CN Pyridinium, 1,1'-[4,4'-biphenylylenebis(carbonylmethylene)]bis[3-carboxy-(8CI) (CA INDEX NAME)

FS 3D CONCORD

MF C28 H22 N2 O6

CI COM

=> fil hcaplus uspatful

FILE 'HCAPLUS' ENTERED AT 08:32:10 ON 26 AUG 1999
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FILE 'USPATFULL' ENTERED AT 08:32:10 ON 26 AUG 1999
CA INDEXING COPYRIGHT (C) 1999 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs hitrn tot

L14 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:509330 HCAPLUS

DN 127:206408

TI Energy-sensitive pyridinium borates as acid-generating agents, their

```
Izv. Akad. Nauk SSSR, Ser. Khim. (1991), (6), 1431-9
    CODEN: IASKA6; ISSN: 0002-3353
    Journal
DT
LΑ
    Russian
    CASREACT 115:255361
OS
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 1999 ACS
    1990:478234 CAPLUS
DN
    113:78234
    New method of 1-pyrazoline ring formation
TI
    Prostakov, N. S.; Varlamov, A. V.; Annan, Hussein; Fomichev, A. A.;
ΑU
Aliev,
    A. E.
    Univ. Druzhby Nar. im. P. Lumumby, Moscow, 117923, USSR
CS
    Khim. Geterotsikl. Soedin. (1989), (12), 1697
SO
     CODEN: KGSSAQ; ISSN: 0453-8234
DT
     Journal
LA
    Russian
     CASREACT 113:78234
OS
L13 ANSWER 3 OF 7 CAPLUS COPYRIGHT 1999 ACS
     1981:165607 CAPLUS
AN
     94:165607
DN
    Pyridinium compound fogging agents for photographic material
ΤI
     Oishi, Yasushi; Hirano, Shigeo
IN
     Fuji Photo Film Co., Ltd., Japan
PΑ
     Ger. Offen., 70 pp.
     CODEN: GWXXBX
DT
     Patent
LА
     German
FAN.CNT 1
                                          APPLICATION NO. DATE
                    KIND DATE
     PATENT NO.
     ----- ----
                                          _____
                    A1 19801030
                                          DE 1980-3014628 19800416
     DE 3014628
     DE 3014628
                     C2
                           19910502
                                          JP 1979-46949
                                                           19790417
                           19801029
     JP 55138742
                      A2
     JP 62004699
                           19870131
                     В4
                                          US 1980-140923
                                                           19800416
                           19820413
     US 4324855
                     Α
                     19790417
PRAI JP 1979-46949
L13 ANSWER 4 OF 7 CAPLUS COPYRIGHT 1999 ACS
     1981:65440 CAPLUS
AN
     94:65440
DN
     Studies on cycloimmonium ylides. Synthesis of some 2,4,6-triaryl-
ТT
     substituted pyridines via picolinium ylides
     Tewari, Ram. S.; Dubey, Ajay K.; Misra, Naresh K.; Dixit, Priya D.
ΑU
     Dep. Chem., H. B. Technol. Inst., Kanpur, 208002, India
     J. Chem. Eng. Data (1981), 26(1), 106-8
     CODEN: JCEAAX; ISSN: 0021-9568
     Journal
DT
LA
     English
L13 ANSWER 5 OF 7 CAPLUS COPYRIGHT 1999 ACS
     1977:601268 CAPLUS
     87:201268
     Heterocyclic ketene thioacetal derivatives. VIII. Synthesis of ketene
     thioacetals having a pyridinium salt
     Tominaga, Yoshinori; Miyake, Yoshinori; Fujito, Hiroshi; Matsuda,
ΑU
Yoshiro;
     Kobayashi, Goro
     Fac. Pharm. Sci., Nagasaki Univ., Nagasaki, Japan
CS
     Yakugaku Zasshi (1977), 97(8), 927-32
     CODEN: YKKZAJ
     Journal
DT
```

Japanese

LΑ

```
Justus Liebigs Ann. Chem. (1975), (5), 849-63
     CODEN: JLACBF
DT
     Journal
     German
LΑ
=> s 19 not 111
             3 L9 NOT L11
L12
=> d 1-3
    ANSWER 1 OF 3 CAPLUS COPYRIGHT 1999 ACS
     1986:572262 CAPLUS
     105:172262
DN
     Stereochemical study on 1,3-dipolar cycloaddition reactions of
ΤI
    heteroaromatic N-ylides with unsymmetrically substituted olefinic
     dipolarophiles
     Tsuge, Otohiko; Kanemasa, Shuji; Takenaka, Shigeori
ΑU
     Interdiscip. Grad. Sch. Eng. Sci., Kyushu Univ., Kasuga, 816, Japan
CS
SO
     Bull. Chem. Soc. Jpn. (1985), 58(11), 3320-36
     CODEN: BCSJA8; ISSN: 0009-2673
DT
     Journal
     English
LΑ
    CASREACT 105:172262
os
    ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS
L12
     1983:453200 CAPLUS
AN
     99:53200
DN
     Reaction of pyridinium phenacylides and related ylides with
TI
     cyclopentadienone derivatives
ΑU
     Yamashita, Yoshiro; Miyauchi, Yukio; Masumura, Mitsuo
     Fac. Eng., Tokushima Univ., Tokushima, 770, Japan
CS
SO
     Chem. Lett. (1983), (4), 489-92
     CODEN: CMLTAG; ISSN: 0366-7022
DT
     Journal
LΑ
    English
L12
    ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS
AN
     1978:614539 CAPLUS
DN
     89:214539
ΤI
     Carbon-13 nuclear magnetic resonance studies of some phosphonium,
     arsonium, sulfonium and pyridinium keto-stabilized salts, and ylides and
     of their palladium(II) complexes
     Fronza, Giovanni; Bravo, Pierfrancesco; Ticozzi, Calimero
ΑU
     Cent. Stud. Sostanze Org. Nat., Politec. Milano, Milan, Italy
CS
     J. Organomet. Chem. (1978), 157(3), 299-310
     CODEN: JORCAI; ISSN: 0022-328X
DT
     Journal
LА
    English
=> s 110 not 111
L13
             7 L10 NOT L11
=> d 1-7
    ANSWER 1 OF 7 CAPLUS COPYRIGHT 1999 ACS
L13
     1991:655361 CAPLUS
ΑN
     115:255361
DN
     Regioselectivity of reactions of azinium salts and ylides with
ΤI
     tetracyanoethylene
     Shestopalov, A. M.; Aitov, I. A.; Sharanin, Yu. A.; Litvinov, V. P.
ΑU
CS
     Inst. Org. Khim. im. Zelinskogo, Moscow, USSR
```

001 (585 ANSWER 6 OF 7 CAPLUS COPYRIGHT 1999 ACS L13 1974:36969 CAPLUS AN 80:36969 DN Synthesis and thermal reaction of pyridinium 3,3-diacyl-1-ΤI benzoylallylides[3,3-diacyl-1-benzoyl-1-(1-pyridinio)prop-2-enides]. Formation of indolizine derivatives Tamura, Yasumitsu; Sumida, Yoshio; Ikeda, Masazumi ΑU Fac. Pharm. Sci., Osaka Univ., Osaka, Japan CS J. Chem. Soc., Perkin Trans. 1 (1973), (19), 2091-5 SO CODEN: JCPRB4 DTJournal English LΑ L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 1999 ACS 1967:453263 CAPLUS AΝ 67:53263 DN Kinetics of the reaction of pyridines with phenacyl bromide in TInitrobenzene Litvinenko, L. M.; Perel'man, L. A. ΑU

Donetsk. Gos. Univ., Donetsk, USSR

Zh. Org. Khim. (1967), 3(5), 936-42

CODEN: ZORKAE
DT Journal
LA Russian

CS SO Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

FILE COVERS 1967 - 26 Aug 1999 VOL 131 ISS 9 FILE LAST UPDATED: 26 Aug 1999 (19990826/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s 17

L9 6 L7

=> s 18

L10 10 L8

=> s 17 and 18

6 L7 10 L8

L11 3 L7 AND L8

=> d 1-3

- L11 ANSWER 1 OF 3 CAPLUS COPYRIGHT 1999 ACS
- AN 1986:590862 CAPLUS
- DN 105:190862
- TI Stereochemical study on 1,3-dipolar cycloaddition reactions of heteroaromatic N-ylides with symmetrically substituted cis and trans olefins
- AU Tsuge, Otohiko; Kanemasa, Shuji; Takenaka, Shigeori
- CS Interdiscip. Grad. Sch. Eng. Sci., Kyushu Univ., Kasuga, 816, Japan
- SO Bull. Chem. Soc. Jpn. (1985), 58(11), 3137-57 CODEN: BCSJA8; ISSN: 0009-2673
- DT Journal
- LA English
- OS CASREACT 105:190862
- L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS
- AN 1978:22552 CAPLUS
- DN 88:22552
- TI Reaction of pyridinium N-ylides with ketene thioacetal derivatives
- AU Tominaga, Yoshinori; Miyake, Yoshinori; Fujito, Hiroshi; Kurata, Keiji; Awaya, Hiroyoshi; Matsuda, Yoshiro; Kobayashi, Goro
- CS Fac. Pharm. Sci., Nagasaki Univ., Nagasaki, Japan
- SO Chem. Pharm. Bull. (1977), 25(7), 1528-33 CODEN: CPBTAL
- DT Journal
- LA English
- L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS
- AN 1975:514165 CAPLUS
- DN 83:114165
- TI Route to 2,6-dihydroxypiperidines
- AU Wild, Peter; Kroehnke, Fritz
- CS Inst. Org. Chem., Univ. Giessen, Giessen, Ger.

compositions, curable compositions containing the agents, and cured products

IN Toba, Yasumasa; Tanaka, Yasuhiro; Yasuike, Madoka

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 74 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

----PI JP 09194816 A2 19970729 JP 1996-7972 19960122
OS MARPAT 127:206408

GI

$$N-R1$$

$$R^2$$

$$\begin{array}{c}
 & R^2 \\
 & + \\
 & N-R^1
\end{array}$$

$$\begin{array}{c}
 & R^2 \\
 & R^2 \\
 & R^2
\end{array}$$
II

AB Title agents comprising pyridinium cations I [R1 = benzyl, phenacyl, allyl, alkoxy, aryloxy (each may be substituted); R = F, Cl, Br, OH, carboxy, mercapto, cyano, NO2, carbamoyl, C1-18 linear, branched, or cyclic alkyl, C2-18 linear, branched, or cyclic alkenyl, C6-18 monocyclic or condensed polycyclic aryl, C7-18 monocyclic or condensed polycyclic arylalkyl, C1-18 linear, branched, or cyclic alkoxyalkyl, C6-18 monocyclic or condensed polycyclic aryloxy, C1-18 linear, branched, or cyclic aliph. acyl, C7-18 monocyclic or condensed polycyclic arom. acyl, C2-19 linear, branched, or cyclic alkoxycarbonyl, C7-19 monocyclic or condensed polycyclic aryloxycarbonyl (each may be substituted with F, Cl, Br, OH, carboxyl, mercapto, cyano, NO2, azide); R and R1 may form ring; k = 0-5] and BYmZn-(Y = F, Cl; Z = Ph substituted with .gtoreq.2electron-attractive groups selected from F, cyano, NO2, CF3; m = 0-3; n =1-4, m + n = 4). Alternatively, the cations are pyridinium II and the anions are tetrakis(pentafluorophenyl)borate or tetrakis[3,5bis(trifluoromethyl)phenyl]borate. Further claimed are (A) compns. contg. the acid-generating agents and sensitizers, (B) curable compns. further contg. acid-curable compds. and optionally radically curable compds. and radical initiators, and (C) their cured products, which are applicable to various uses, e.g., plastic moldings, sealing materials, printing inks, photosensitive printing plates, photoresists, etc. Thus, a mixt. of 100 parts ERL 4221 (epoxy compds.) and 1 part N-benzylpyridinium tetrakis(pentafluorophenyl)borate was UV-irradiated for 5 min to give cured product.

IT 194474-34-5

RL: CAT (Catalyst use); USES (Uses)
 (pyridinium borates as energy-sensitive acid-generating agents for acid-curable compns.)

```
L14 ANSWER 2 OF 8 USPATFULL
ΑN
       93:52588 USPATFULL
ΤI
       Alkylaminoalkyl derivatives of benzofuran, benzothiophene, indole and
       indolizine, process for their preparation and compositions containing
       them
       Gubin, Jean, Brussels, Belgium
IN
       Chatelain, Pierre, Brussels, Belgium
       Lucchetti, Jean, Chastre, Belgium
       Rosseels, Gilbert, Wemmel, Belgium
       Inion, Henri, Wemmel, Belgium
       Sanofi, Paris, France (non-U.S. corporation)
PΑ
       (fs 5223510 19)930629
PΙ
       US 1991-736580 19910726 (7)
ΑI
       FR 1990-10036
                          19900806
PRAI
      Utility
DT
EXNAM
      Primary Examiner: Higel, Floyd D.
      Wegner, Cantor, Mueller & Player
LREP
      Number of Claims: 26
CLMN
ECL
       Exemplary Claim: 1
      No Drawings
DRWN
LN.CNT 2700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The subject of the invention is benzofuran, benzothiophene, indole or
       indolizine compounds of general formula: ##STR1## in which: Het
       represents one of the groups: ##STR2## in which T,T' and T"represent
       particularly a group: ##STR3## R and R.sub.a, identical or different,
       represent X represent --O-- or --S--
       Y represents a radical ##STR4## These compounds are useful as medecines
       particularly for the treatment of pathological syndroms of the
       cardio-vascular system.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    54342-81-3P
        (prepn. and reaction of, in prepn. of cardiovascular agents)
L14 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 1999 ACS
    1992:426336 HCAPLUS
ΑN
    117:26336
DN
    Preparation of benzofurans, benzothiophenes, indoles, and indolizines as
TТ
    cardiovascular agents
     Gubin, Jean; Lucchetti, Jean; Inion, Henri; Chatelain, Pierre; Rosseels,
IN
     Gilbert; Kilenyi, Steven
PA
    SANOFI S. A., Fr.; Societe Anon. Sanofi-Pharma N. V.
    Eur. Pat. Appl., 81 pp.
SO
     CODEN: EPXXDW
DT
     Patent
T.A
    French
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
                     ____
                           _____
                                          -----
                                                           -----
                           19920219
                                          EP 1991-402201
PΙ
    EP 471609
                      A1
                                                           19910806
    EP 471609
                     B1 19961127
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
     FR 2665444
                    A1 19920207
                                         FR 1990-10036
                                                           19900806
     FR 2665444
                     B1
                           19921127
     CA 2047773
                     AA
                           19920207
                                          CA 1991-2047773 19910724.
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US 5223510

Α

19930629

US 1991-736580

19910726

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	ΑU	9181428	A1	19920213	ΑU	1991-81428	19910730
	ΑU	648569	B2	19940428			
	FI	9103704	A	19920207	FI	1991-3704	19910802
	NO	9103033	Α	19920207	ΝО	1991-3033	19910805
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	NO	179042	С	19960724			
	BR	9103354	A	19920505	BR	1991-3354	19910805
	JΡ	04316554	A2	19921106	JΡ	1991-195431	19910805
	JP	2795759	В2	19980910			
	PL	168044	В1	19951230	PL	1991-291334	19910805
	RU	2095357	C1	19971110	RU	1991-5001351	19910805
	HU	62280	A2	19930428	ΗU	1991-2610	19910806
	ΑТ	145645	E	19961215	ΑT	1991-402201	19910806
	ES	2096639	Т3	19970316	ES	1991-402201	19910806
PRAI	FR	1990-10036	19900806				
os	MAF	RPAT 117:26336					

$$W - W^1$$

$$A(CH_2)_{nNR}^2R^3$$

$$R^1Y$$

Title compds. I [R1 = various (un) substituted benzofuryl, benzothienyl, AB indolyl, and indolizinyl groups; Y = CO, CH(OR4); R2 = H, alkyl; R3 = alkyl, certain (hetero)aryl and (hetero)aralkyl; or R2R3 = alkylene or alkenylene optionally substituted by Ph or interrupted by O, NH, alkyl- or phenylimino, or N; R4 = H, alkyl, acyl; A = O, S, NHCO; when W = W' = CHor N, Z = O or S; or W, W', and Z form (un) substituted benzene nucleus; n = 1-5] were prepd. For example, 2-butyl-5-nitrobenzofuran (prepn. given) underwent Friedel-Crafts reaction with anisoyl chloride and SnCl4 to give 83.5% 3-(4-methoxybenzoyl) deriv., which was subjected to demethylation by AlC13 (90.1%), etherification with Cl(CH2)3NBu2 (88.76%), hydrogenation of the NO2 group (95.28%), and N-methanesulfonylation (61.1%) to give title compd. II, isolated as the HCl salt. At 10 mg/kg in anesthetized rats, II increased the duration of action potential by 60%. A formulation, 35 syntheses of I, approx. 100 addnl. listed I, addnl. action potential data, and antiadrenergic data for some I, are given. I are also said to be useful as potentiators of anticancer agents.

IT 54342-81-3P

GI

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reaction of, in prepn. of cardiovascular agents)

L14 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 1999 ACS

AN 1978:508995 HCAPLUS

DN 89:108995

TI Indolizines. V. Synthesis and properties of 2-methyl(aryl)-8-carbethoxyindolizines

AU Loseva, T. S.; Goizman, M. S.; Alekseeva, L. M.; Shvarts, O. R.; Mikhlina, E. E.; Yakhontov, L. N.

CS Vses. Nauchno-Issled. Khim.-Farm. Inst., Moscow, USSR

SO Khim. Geterotsikl. Soedin. (1978), (6), 802-8

CODEN: KGSSAQ; ISSN: 0453-8234

DT Journal

LA Russian

GΙ

$$R^2$$
 R^2
 R^2

AB Indolizines I (R = Me, Ph, p-tolyl, p-MeOC6H4, p-O2NC6H4; R1 = Ac, CHO, Bz, NO, CH2NMe2, morpholinomethyl; R2 = H, morpholinomethyl) were prepd. in 35-86% yield from I (R1 = R2 = H) by 6 different methods, e.g., Mannich reaction or electrophilic substitution. I (R1 = R2 = H) were prepd. from pyridinium salts II. The NMR of the prepd. compds. was discussed. There was a correlation of pKa with Hammett .sigma.p consts. for I (R = aryl, R1 = R2 = H).

IT 67557-44-2P 67557-45-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and cyclization of)

L14 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 1999 ACS

AN 1976:179988 HCAPLUS

DN 84:179988

TI Indolizines. III. Some electrophilic substitution reactions in 2-methyl(aryl)-7-ethoxycarbonylindolizine series

AU Loseva, T. S.; Yanina, A. D.; Mikhlina, E. E.; Yakhontov, L. N.

CS Vses. Nauchno-Issled. Khim.-Farm. Inst. im. Ordzhonikidze, Moscow, USSR

SO Khim. Geterotsikl. Soedin. (1976), (3), 348-51 CODEN: KGSSAQ

DT Journal

LA Russian

GI

Indolizinecarboxylates (I, R = Ph, Me, p-MeOC6H4, p-BrC6H4, p-O2NC6H4, R1 AB = CHO, MeCO, PhCO, p-ClC6H4CO, CH2NMe2) were obtained in 42-95% yields in 3 steps from II by treatment with aq. NH3, followed by cyclization to give I (R1 = H) and subsequent electrophilic substitution.

IT 54342-81-3P 59195-35-6P 59195-36-7P

59195-37-8P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and inner salt formation from)

ANSWER 6 OF 8 HCAPLUS COPYRIGHT 1999 ACS L14

1976:421063 HCAPLUS AN

DN 85:21063

Synthesis and properties of 2-methyl(aryl)-6-ΤI Indolizines. II. ethoxycarbonylindolizines

ΑU Loseva, T. S.; Yanina, A. D.; Mikhlina, E. E.; Yakhontov, L. N.

Vses. Nauchno-Issled. Khim.-Farm. Inst. im. Ordzhonikidze, Moscow, USSR CS

SO Khim. Geterotsikl. Soedin. (1976), (2), 209-14 CODEN: KGSSAQ

DT Journal

LΑ Russian

GΙ

AB Condensation-cyclization of Et 6-methyl-3-pyridinecarboxylate with RCOCH2Br (R = Me, Ph, substituted phenyl) gave the title indolizines I, which underwent electrophilic substitution reactions to give 3-mono- and 1,3-disubstituted derivs. of I. Thus, Vilsmeier formylation of I (R = Me) gave 47% of the corresponding 1,3-diformyl deriv., whereas I (R = Ph) gave 90.5% of the corresponding 3-formyl deriv.

59603-48-4P 59603-49-5P 59603-50-8P IT 59603-51-9P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and cyclization of)

L14 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 1999 ACS

ΑN 1975:16671 HCAPLUS

DN 82:16671

TI Synthesis and properties of 2-methyl(aryl)-7-ethoxy carbonylindolizines

ΑU Mikhlina, E. E.; Yanina, A. D.; Loseva, T. S.; Turchin, K. F.; Yakhontov, L. N.

CS Vses. Nauchno-Issled. Khim.-Farm. Inst. im. Ordzhonikidze, Moscow, USSR

SO Khim. Geterotsikl. Soedin. (1974), (7), 977-81 CODEN: KGSSAO

DТ Journal

LA Russian

For diagram(s), see printed CA Issue.

AB Alkylation of the isonicotinates I (R = Me, Et) with BrCH2COCH3 and BrCH2COPh gave the pyridinium bromides II (R1 = Me, Ph; resp.); cyclization of II (R = Et; R1 = Me, Ph) in refluxing EtOH contg. NaHCO3 yielded Et 2-methyl-7-indolizinecarboxyl-ate (III) and 2-phenyl-7-indolizinecarboxylate, resp. Successive treatment of II (R = GERSTL .

AU 1613

09/118388

18785